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Quality First Quality

nce again we are proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2010. We remain committed to delivering high-quality drinking water to our customers and to meeting the challenges of new regulations, source water protection, and water conservation. We encourage you to share your thoughts after reviewing the information contained in this report. Should you ever have any questions or concerns, we are always available to assist you.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These

people should seek advice about drinking water

from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791

or http://water.epa.gov/drink/hotline.

Substances Occasionally Found in Drinking Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at 800-426-4791.

Where Does My Water Come From?

The City of LaGrange's water supply comes from the abundant resources of the Chattahoochee River and West Point Lake Reservoir. This resource contains sufficient quantities of water to supply our community's needs now and well into the future. Our advanced treatment process ensures that source water is thoroughly disinfected, cleaned, and filtered prior to delivery to our customers.

A source water assessment has been conducted on the City of LaGrange watershed as required by the Safe Drinking Water Act. The purpose of the assessment is to identify potential sources of contamination and the possible risk that is imposed on our water supply. Our overall susceptibility to source water contamination was determined through this analysis to be low. A copy of the report can be obtained from the City upon request.

Our Water Treatment Process

ur water treatment process consists of a series of steps. First, source water is pumped from West Point Lake into a temporary holding pond at our water plant. The water is then directed to a mixing basin where aluminum sulfate and complex polymers are added. These chemicals cause small particles in the water to adhere to one another and form larger particles called floc, making them heavy enough to settle into a basin from which they can be later removed. Chlorine and chlorine dioxide are then added for disinfection, metal removal, and taste and odor control. At this point, the water is filtered through layers of fine coal and silicate sand to remove any remaining smaller, suspended particles. Turbidity, a measure of water clarity, is regularly monitored by plant operators to ensure that only clean drinking water emerges from the filters.

Chlorine is added a second time, and the water is stored in underground holding tanks to allow time for disinfection to occur. We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste or allowing harmful levels of by-products to form. Finally, sodium hydroxide is added to adjust pH and alkalinity, fluoride is added as required by law to prevent tooth decay, and a corrosion inhibitor is added to protect piping before the water is pumped into the distribution system and eventually to your home or business.

Tap vs. Bottled Water

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced many people that water purchased in bottles is healthier than tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, 25 percent or more of bottled water is actually just bottled tap water.

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their website at www.nrdc.org/water/drinking/bw/exesum.asp.

Questions?

For more information about this report or for any questions relating to your drinking water, please contact the City of LaGrange Water Division at 706-883-2130. You may also email us at utilities@lagrange.net or visit our website at www.lagrange.net.

Testing Associated with Home Plumbing

Elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water originates primarily from older service lines and home plumbing. Lead solder was banned in 1986 and plumbing fixtures were required to be lead free in 1998. If you live in a home that you suspect contains lead, there are steps you can take to reduce your exposure. When your water has been sitting for several hours, flush your tap for 30 seconds to 2 minutes before using water for drinking or cooking. You may also wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Initial Distribution System Evaluation

We were required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products (e.g., HAAs and TTHMs) result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water.

Water Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhome) and the Centers for Disease Control and Prevention (www.cdc.gov) websites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Georgia Environmental Protection Division has a website (www.conservewatergeorgia.net) that provides complete and current information on water issues in Georgia, including valuable information about our watershed.



Why do I get this report each year?

Community water system operators are required by federal law to provide their customers with an annual water quality report. The report helps people make informed choices about the water they drink. It lets people know what contaminants, if any, are in their drinking water and how these contaminants may affect their health. It also gives

the system operators a chance to tell customers what it takes to deliver safe drinking water.

Why does my water sometimes look "milky"?

The "milky" look is caused by tiny air bubbles in the water. The water in the pipes coming into your home or business might be under a bit of pressure, and gasses (the air) are dissolved and trapped in the pressurized water as it flows into your glass. As the air bubbles rise in the glass, they break free at the surface, thus clearing up the water. Although the milky appearance might be disconcerting, the air bubbles won't affect the quality or taste of the water.

Is it okay to use hot water from the tap for cooking and drinking?

No, always use cold water. Hot water is more likely to contain rust, copper, and lead from household plumbing and water heaters. These substances can dissolve into hot water faster than they do into cold water, especially when the faucet has not been used for an extended period of time.

How many contaminants are regulated in drinking water?

The U.S. EPA regulates over 80 contaminants in drinking water. Some states may choose to regulate additional contaminants or to set stricter standards, but all states must have standards at least as stringent as the U.S. EPA's.

Sampling Results

During the past year, we have taken hundreds of water samples in order to detect the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows the contaminants that were present in our drinking water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES								
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE	
Chlorine (ppm)	2010	[4]	[4]	1.17	1.07-1.29	No	Water additive used to control microbes	
Chlorine Dioxide (ppb)	2010	800	800	230	0.07-480	No	Water additive used to control microbes	
Chlorite (ppm)	2010	1	0.8	0.44	0.04-0.60	No	By-product of drinking water disinfection	
Fluoride (ppm)	2010	4	4	0.87	0.51–1.01	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	
Haloacetic Acids [HAA] ¹ (ppb)	2010	60	NA	11.8	8–16	No	By-product of drinking water disinfection	
Nitrate (ppm)	2010	10	10	1.8	1.8–1.8	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	
TTHMs [Total Trihalomethanes] ¹ (ppb)	2010	80	NA	34.8	13–61	No	By-product of drinking water disinfection	
Total Organic Carbon (ppm)	2010	TT	NA	1.37	0.87-1.8	No	Naturally present in the environment	
Turbidity ² (NTU)	2010	TT	NA	0.24	0.03-0.24	No	Soil runoff	
Turbidity (Lowest monthly percent of samples meeting limit)	2010	TT	NA	100	NA	No	Soil runoff	

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2009	1.3	1.3	0.13	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2009	15	0	2.5	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2010	200	NA	10	10–10	No	Erosion of natural deposits; Residual from some surface water treatment processes
Iron (ppb)	2010	300	NA	10	10-20	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2010	50	NA	10	10–20	No	Leaching from natural deposits
pH (Units)	2010	6.5–8.5	NA	7.3	6.4–8.3	No	Naturally occurring

Definitions

AL (Action Level):

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable.

NTU (Nephelometric Turbidity

Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (**Treatment Technique**): A required process intended to reduce the level of a contaminant in drinking water.

UNREGULATED SUBSTANCES				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2009	8.2	NA	By-product of drinking water disinfection
Bromoform (ppm)	2009	0.56	NA	By-product of drinking water disinfection
Chlorodibromomethane (ppb)	2009	4.9	NA	By-product of drinking water disinfection
Chloroform (ppb)	2009	7.7	NA	By-product of drinking water disinfection
Sodium (ppm)	2009	9.5	NA	Naturally occurring

OTHER SUBSTANCES			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
1,2,4-Trimethyl-5-nitrobenzene (ppb)	2009	4.2	3.9-4.4
1,3,5-Trimethyl-2-nitrobenzene (ppb)	2009	4.0	3.8-4.3
1,3-Dimethyl-2-nitrobenzene (ppb)	2009	4.4	4.2–4.6
Perylene-d12 (ppb)	2009	4.4	4.2–4.6
Triphenylphosphate (ppb)	2009	4.7	4.2-5.1

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² Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.